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ABSTRACT

West German research on children's interests is described, with emphasis on a 3-year longitudinal study of 12 children, aged 3 to 7. Two main lines of interest research are identified: (1) research activities rooted in the tradition of differential psychology emphasizing vocational interests, traits, and attitudes; and (2) research based on a new educationally oriented theory of interest, which defines interest as specific form of a relationship between a person and an object from the environment (PO). The PO-relationship involves internal and external actions, as well as an enduring disposition towards an object. Three research approaches include the formation of persistance and selectivity in interest development; specific interest objects such as literature and academic subjects; and ontogenetic development of interests. The longitudinal study collected data about the object-related activities and social behavior of young children. Results indicated common PO-relationships involving role playing, tinkering, painting, and construction games. There were marked differences in their object preference structure (one or two highly preferred objects versus several equally-preferred ones). Most PO-relationships were more characterized by an activity type than a specific object type. Both the educational and social environments influenced the development of PO-relationships. (GDC)

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The Development of Interests: Research Programs in the Federal Republic of Germany

by

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1. Introduction

In everyday thinking, the concept of interest plays an important role not only in explaining excellent performance and high achievement, but also in explaining failure and withdrawal inside and outside of school settings. The concept of interest also was a central component in former theories of personality development and learning (JAMES, 1890; DEWEY, 1913; THORNDIKE, 1935). In contrast to this, actual theories of education and educational psychology rarely consider interest as an important concept. A review of basic textbooks and review texts on educational psychology reveals in many cases that the concept of 'interest' is not even mentioned.

The neglecting of this concept in actual theories and in recent research programs may be - at least partly - explained by its replacement through seemingly more exact concepts like curiosity, attention, arousal, and achievement motivation. These concepts could supersede the concept of interest, but they are not able to replace it adequately. Important components of the meaning of the original term are not covered by these new concepts. This gave to several authors reason to reanalyze the concept of interest in its original meaning (e.g. ECKBLAD, 1981; RENNINGER & WOZNIAK, 1985; SCHIEFELE et al., 1983; TODT, 1978; TRAVERS, 1978). This also holds true for new research programs in West Germany. Two main lines of interest research can be separated:

a) Research activities rooted in the tradition of differential psychology.
b) Research based on a new educationally oriented theory of interest.

2. Interest Research in the Tradition of Differential Psychology

Within differential psychology there has been a long lasting tradition of more pragmatically oriented interest research in the area of vocational guidance. One of the most important goals in this tradition was to develop tests and other instruments measur-

ing vocational interests (e.g. IRLE, 1955; KELLER, 1963; TODT, 1978). These models and methods were applied to the problem of personnel decisions in the area of education. A number of interest tests were developed for counseling purposes in order to predict academic achievement in school and university (e.g. ALLEHOFF, 1985; HOLLAND, 1973; STRONG, 1964[5]; SUPER & CRITES, 1962). In West Germany this type of research has been conducted by TODT and his colleagues (TODT, 1978; 1985). In his theoretical concept, interest is seen as a general and stable behavioral tendency (disposition), directed towards various objects, activities or experiences. This conception of interest is strongly related to the trait concept in differential psychology and to the attitude concept of social psychology (e.g. CATTELL, 1965; GUILFORD, 1959).

Most of the empirical studies performed by TODT are focused on the description of differences among individual interests. His studies mainly deal with the development of interest in students, 10-15 years of age. The most important instrument used is the so-called 'Differential Interest Test' (DIT). Subjects have to answer the questions how much he or she likes or would like certain activities in the following content areas: art, technology and science, literature and language, social and educational issues, politics and economy, entertainment, biology, mathematics, music, and sports.

The results of TODT's empirical studies can be summarized as follows:

- High correlations were found between interest and attitude measures with respect to the same area (up to .78). This result supports the assumption that interests (as conceptualized by TODT) and attitudes represent similar theoretical concepts.

- Correlations between certain dimensions of motivation (e.g. achievement and cooperation) and single dimensions of the DIT are relatively high (up to .65). TODT's interpretation of this result is that interests may satisfy different kinds of needs

(e.g. interest in science may serve the needs of order, achievement, and variation).

- Interests and abilities (e.g. intelligence) are correlated moderately high.

- During the course of development from childhood to adolescence, specific increases or decreases in different interest domains will occur. There are also typical sex differences (e.g. boys develop higher interests than girls in the area of natural science and technology).

- In lower grades students have higher correlations between different school related interests. As they get older, interests become more independent from each other.

- Family background variables have only a weak impact upon the structure of individual interests (e.g. SES, interests of parents, family atmosphere). The only exception to this is a high correlation between parental stimulation of certain interest domains and the type of interests their children develop.

- Seemingly, school and instruction have no substantial impact upon students' interest development.

- TODT concludes that the development of interests is mainly influenced by sex stereotypes. Accordingly to TODT during the first ten years of age the most important differentiation of interests is caused by sex role identification. A second important differentiation of interests occurs in connection with taking over vocational roles. In the course of professional careers individual interests become more and more stabilized and specialized (see also GOTTFREDSON, 1981; TRAVERS, 1978).

Most of the reported results are descriptive. They are appropriate to describe some aspects of interest development in educational settings and for certain subgroups (e.g. male and female). Re-

strictions, however, are encountered when explanatory factors of interest development are to be studied with this procedure.

More recently TODT has conducted studies concerning the impact of school upon interest development. He has also expanded his theoretical concept by distinguishing three types of interest: interest in instruction, leisure time activities (specific interests), and vocational interests (general interests).
Using TODT's theoretical concept HOFFMANN, LEHRKE and HÄUSSLER have started a longitudinal study about interest development in the areas of science and technology in grades 5 to 10. The study is mainly concerned with sex related and other factors influencing the interest development (HOFFMANN & LEHRKE, 1986; HÄUSSLER, 1985; in press).

TODT and colleagues have promoted interest research in West Germany. His work had great influence on teacher education and in different areas of guidance, despite obvious shortcomings in his theoretical concept in the face of educational demands.

Emphasizing educational demands SCHIEFELE et al. have proposed a new theoretical concept (HEILAND & PRENZEL, 1979; PRENZEL, KRAPP & SCHIEFELE, 1986; SCHIEFELE, HAUSSER & SCHNEIDER, 1979; SCHIEFELE et al., 1983). Following the theoretical framework of an educational interest theory will be presented and then expounded with the help of related research projects.

3. An Educational Theory of Interest

3.1 The Theoretical Concept

The theoretical framework determines the area of consideration within the theory. It defines the interest construct and at the same time forms a base for future theoretical systematization and for empirical studies.
Interest is defined as a specific form of relationship between a person and an object. The object of interest is conceived as a

part of the environment. In a person's perception the object of interest can be distuingished from other objects in the real (or imagined) environment and is represented by a separate and individual cognitive structure. The same objects of interest may differ substantially with respect to their subjective representation in different individuals. Music, for example, is an object of interest which is represented in different manners in a youngster listening to rock music and a professional classical musician. In certain areas concrete objects are necessary prerequisites, e.g. books necessarily belong to the domain of 'literature' and instruments, LPs etc. belong to the area of 'music'. These objects are called 'reference objects', which serve as 'reality anchors' by assessing subjective object perceptions of an individual. That is, reference objects are the means by which subjective representations are made tensable. The subjective perception of an interest object determines the type of relationship between person and object, thus expanding or narrowing the limits of learning for an individual in a specific interest domain.

With respect to the person-object relationship (= PO-relationship), two levels of analysis must be separated:

- The first level of analysis deals with the internal and external actions related with an object. Interests are understood as an actual relationship between a person and an object at a certain time and in a specific situation. The first level of analysis therefore refers to the concrete interaction between a person and an object.
- The second level of analysis interprets interest as an enduring disposition or a general orientation towards an object. This disposition is manifested in repeated engagements with the object and may be latent for a period of time. In this sense interest is defined as a relatively stable relationship between person and object.

The actual as well as the enduring (structural) PO-relationship are defined by a number of specific features within three domains:

(1) In the cognitive domain interest is characterized by high cog-

nitive complexity related to the object (GELDER, 1982; NORMAN & RUMELHART, 1975; SEILER, 1978). In actual performance this is demonstrated by a high variability of object perception and by an extensive repertory of interest related behaviors. The enduring PO-relationship is characterized by a relatively differentiated and integrated basis of knowledge. The person possesses clear cognitive schemata, which are combined in a complex network representing the interest domain true to reality.

(2) In the emotional domain interest is characterized by stimulating, exciting and pleasant emotions related to the object. The interest guided performance is accompanied by pleasant feelings, e.g. joy, being totally immersed in an occupation, in the sense of a 'flow'-experience as described by CZIKSZENTMIHALY (1975). Positive affect is also characteristic for an enduring PO-relationship. The object representation, thinking of and talking about the interest object are generally associated with pleasant feelings.

(3) In the value domain interest is characterized by a high value placed on the interest object. The object itself and engagement with the object are experienced by the person as subjectively meaningful. In the actual PO-relationship this value component appears in the so-called 'self-intentionality' of the performance: Engagement in the object is meaningful in itself and is therefore intended. It is not dependent on external reinforcement (performance must not be initiated through instrumental purposes).
With regard to enduring PO-relationships the value aspect is manifested by highly ranking the object within one's hierarchy of values. Thus interest is related to the self-concept of a person: The person defines him or herself as an individual who masters certain activities and enjoys participating in them.

Within this theoretical framework of a general theory of interest more specific problems and questions can be generated. They are related to three types of subtheories:

(1) Differential subtheories are concerned with inter- and intra-individual differences in the quantitative and qualitative degree

of interest in certain object areas.

(2) Actual-genetic subtheories are focused on the process of interest performance in specific situations and under certain conditions.

(3) Ontogenetic subtheories are related to the processes of development and change of interest in the individuals' life history.

3.2 Specification of the General Theory in Research Approaches

To date three approaches have been developed to specify the general interest theory.

(1) Formation of 'persistence' and 'selectivity' in interest development

PRENZEL (1984) and PRENZEL, KRAPP & SCHIEFELE (1986) have presented a model of how interests operate. In this model two features of the PO-relationship are expounded:
The first aspect, 'persistence', is defined as lasting readiness to engage in an object of interest. Indicators for persistence are, among others, frequency and duration of the occupation with the object.
The second aspect, 'selectivity', is defined as formation or change of thematic emphases within an interest area over a longer period of time. A further intention is to explore the nature of the relationship between persistence and selectivity on the one hand and the cognitive, emotional and value components on the other hand. Empirical studies on the topics of persistence and selectivity are beeing conducted with youngsters in the domain of electronic data processing (reference object: personal computer) and music (reference object: musical instrument). One of the most important questions is, in which manner cognitive and emotional effects of interest oriented actions influence the development of persistence and selectivity.

(2) Research on specific interest objects: Literature and academic subjects.

Young people's literary interests are being investigated by an interdisciplinary team (STOCKER & SCHIEFELE, 1982; WALSER & SCHMIDT-MULLER, 1986). The main goal of this project is the analysis of changes in reading habits of students between 12 and 16 years of age. On the one hand, the study is concerned with the systematic description of preferences and preference structures with respect to literature. On the other hand factors inside and outside of school determining literary interest are analyzed.

The 'study interest project' has as its goals the development and validation of adequate instruments to measure interests in specific academic subjects and the related knowledge structures. Furthermore, type and degree of relationships between subject interest, study behavior, mood, and type of study related cognitive structures will be analyzed. In the first step of the project a 'Study Interest Questionnaire' (SIQ) was developed and administered to a group of 400 freshmen studying different academic subjects. In addition a subgroup of 80 students kept study diaries (to get information about study behavior), and filled in semantic differentials (for emotional aspects of study behavior). Association and other cognition tests were administered to measure their cognitive structure. The next step will be to separate students who are interested in their major field of study from students who are not or only little interested, in order to examine how these groups differ with respect to their cognitive structures. Preliminary results show that the SIQ seems to be reliable and valid as well. It seems to be possible to measure interests concerning academic subjects as deduced from the underlying theory.

(3) Ontogenetic studies

A number of theoretical and empirical studies have been concerned with the question of how early stages of interest development may be conceived, and which factors play an important role in the early phases of interest development.

FINK (1984) and FINK & KRAPP (1986) have raised the question of the existence of similarities between the type and degree of social relationships of a child (e.g. degree of attachment of the child to its mother) and its early relationships to predominant objects (e.g. toys, 'security blanket'). In a longitudinal study interest development in kindergarten and elementary school is being examined. This study will be discussed in more detail.

4. A Longitudinal Study on Early Stages of Interest Development

4.1 Purpose

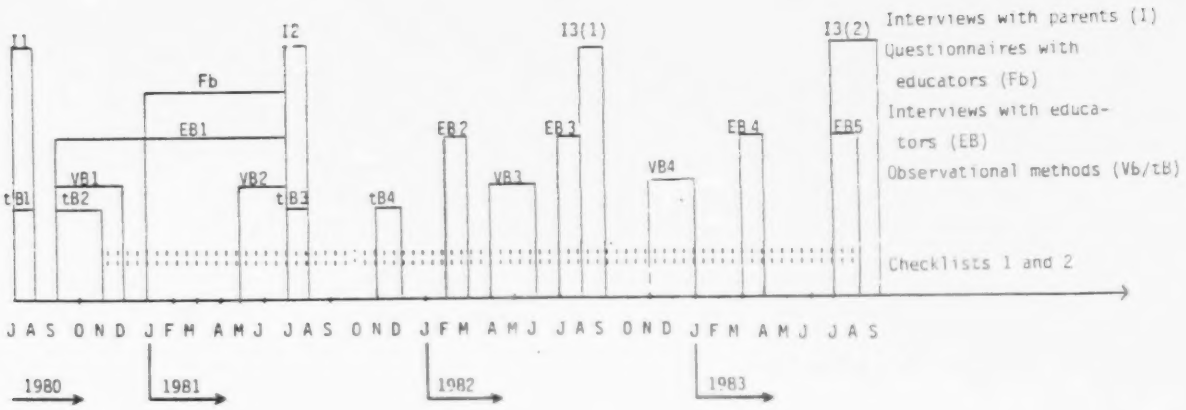
The general goal of this explorative study was to collect data from single case studies in order to describe typical courses and important determinants of interest development at kindergarten and elementary school age. Moreover specific problems should be analyzed, e.g. the emergence of predominant PO-relationships in family and kindergarten, typical age related changes in the structure of an individual's PO-relationships, and ecological and social determinants (especially in kindergarten) influencing interest development. The results of this research should enable us to plan more precise empirical studies.

4.2 Design and Methods

The 'interest development project' can be regarded as a longitudinal pilot study. Observational and questionnaire data were collected continuously over a period of about 3 years from a small group of children (n = 12) (see figure 1).

The subjects are members of a group of children who entered the kindergarten of the 'State Institute of Early Childhood' (Munich) in autumn 1980. At that time the children's age ranged from 3;7 to 4;6 years. During the first two years we were able to gather data continuously by means of two checklists, one measuring the quality of object related activities, and the other measuring the

Figure 1: Time diagram of the applied methods



quality of the children's social behavior. During the first two years various observational methods were alo used at the children's home and in kindergarten. At large but regular intervals, interviews were conducted with parents and educators. The parents were interviewed at the end of each year of kindergarten. The semistructured but detailed interviews lasted about 1 1/2 to 2 hours and were based on a well prepared guideline. One group of questions referred to the child's preferred activities, games and objects, his playing behavior and the type of interaction with the favoured objects. A second group of questions referred to the child's social contacts, especially with friends and playmates. A third group of questions referred to developmental changes and presumed determinants of these changes.

4.3 Selected Findings

The results of the study presented here are based mainly on interview data. They deal with the following questions: (1) Do children of this age group already have predominant PO-relationships which can be interpreted as emerging roots of future interests? (2) What kind of typical changes can be found with respect to an indivi-

dual's structure of PO-relationships? (3) What kind of influencing factors foster or restrain the early phases of interest development?

4.3.1 Assessing Predominant PO-Relationships

Obviously, the interests of children at kindergarten and elementary school age differ in many ways from the interests of youngsters and adults. Nevertheless, at this stage already distinct preferences with respect to certain activities and objects can be found. These preferences presumably characterize the early stage of interest development.

The first step in assessing a (single) predominant PO-relationship of a child was to summarize and reconstruct the whole pattern of a child's meaningful and relatively stable relationships to objects. Two sources of data were analyzed: (1) Statements of parents and educators concerning the child's preferred activities, games, etc. (2) Statements concerning objects or topics, which play a comparatively important role in a child's playing behavior.

There are two possibilities to reconstruct an indivudual's PO-relationship: One way is to look for a general dimension in (playing) activities, which can be used to summarize several activities into one (subjectively meaningful) category. Objects or 'topics of interest' are then assigned to this dimension of activities. The result is an 'activity oriented' PO-relationship. A second way is to start with the reconstruction of an object category (e.g. animals) and then assign activities to this 'object oriented' PO-relationship. One child (No.3), for instance, was involved in a PO-relationship we called 'tinkering', which included only a few closely related activities (e.g. painting, carving, cutting out, glueing) but several real or imagined objects (e.g. paper, wood, textile fabric, and buildings, automobiles etc.). In another case (child No. 12) an object dimension (animals) was the anchor of an object oriented PO-relationship. It included a lot of different activities like gathering pictures of animals, visiting a zoo or play acting as an animal. A group of closely related objects (e.g. living animals, animal books, animal drawings etc.) could be

assigned to this group of activities. By this procedure we assessed and summarized all reconstructable PO-relationships of all children once a year (at the end of the kindergarten term). As an example the following list presents the reconstructed PO-relationships of child No.3 at the end of the first year of kindergarten:

- Role and fantasy plays with different object categories like "cooking and eating", "doctor", "hairdresser", "animals", and "store".

- Physical activities like running, jumping, swinging, gliding, climbing, etc. with varying object categories.

- Watching peers playing, and viewing picture-books of varying content.

- Painting, colouring, and drawing.

A predominant PO-relationship is characterized by its subjectively experienced importance or preference. Preference was assessed by means of two different indicators: The frequency of performing those activities, which characterize the PO-relationship, and the extent to which the children enjoyed engaging in them. These indicators of preference are based on questionnaire data (educators) and interview data (parents). The questionnaires allowed for computing quantitative indices and were modified and completed on the basis of interview statements concerning directly the presumed preferences of a child's playing behavior.

Putting aside individually varying courses of development, three remarkable general results apear:

(1) The reconstructed PO-relationships are very similar among the children. The most frequent PO-relationships involve role playing, tinkering, painting, and construction games.

(2) There are marked differences with regard to the distinctiveness of the subjects' 'preference structure'. Some of them have

only one or two highly preferred PO-relationships (high distinctiveness of the preference structure), while others have several equally preferred PO-relationships (low distinctiveness of the preference structure).

(3) Most of the reconstructed PO-relationships are better characterized by a kind of activity than by a specific object area. An exception is child No. 12. He performs a wide range of different activities, all referring to the same object category: "animals" (role playing animals, viewing picture-books of animals, visiting the zoo, and other activities including animals).

4.3.2 Development of Predominant PO-Relationships

The progress of PO-relationships has been registered continuously for all the children. The results can be summarized as follows:

(1) During kindergarten almost every child changes his preference structure. As a rule these changes take place slowly. Only rarely we find short-term or even dramatic changes in the activity or preference structure.

(2) Experiences in kindergarten have a delayed effect. The children hold fast to their old activities regardless of a variety of new stimulations. After some time - normally associated with the emergence of new social relationships (friends) - new PO-relations develop, or changes in the preference structure occur.

(3) The continuous development of one thematically constant PO-relationship over a longer time has been observed only for few children. Child No. 12 is an example. This child showed an extraordinary preference for the PO-relation "animals" already before he entered kindergarten. The central impact of that PO-relation could also be observed later while he was attending kindergarten. Here he mainly role-played animals. He maintained his preference for animals even in primary school, although his activities changed considerably. For example, we could observe that he replaced col-

lecting stuffed animals with taking care of some goldfish. Other activities such as reading remained the same. We assume, that this child's behaviour exemplifies in a typical manner that a highly preferred PO-relationship may represent the origin of a later interest.

4.3.2 Conducive and Restraining Conditions of Interest Development

Two factors seem to have a great influence upon interest development: Stability and convergence of educational environments and the quality of social relationships. Furthermore there are some special hypotheses about interest development, which can be supported by our data.

(1) Stability and convergence of educational environments

Stability of environmental conditions is presumably an important factor influencing the continuous development of lasting PO-relationships. Stability does not only refer to direct educational influences (educational interaction), but also to material, ecological, and socio-structural conditions. As our study revealed the convergence or divergence of environmental conditions is very important for retaining old and developing new PO-relationships. It proved to be of particular importance whether or not similar play materials are available in kindergarten and at home, whether or not the activities were supported by educators, and whether or not there were contacts between mother and educators in kindergarten. All these conditions were fullfilled for child No. 12., mentioned above.

Child No. 2, the only lower-class child, represented a completely different case. Despite intensive efforts, the educators could not overcome the heterogenity of educational conditions between home and school. This child even showed a tendency to a regressive interest development. He was neither able to build up new enduring PO-relationships in kindergarten, nor was he able to maintain

activities which he had already developed at home with skill and tenacity.

(2) Development and quality of social relationships

Social factors seem to have a great impact on the development or change of object related person-environment orientations. One set of factors are convergence or divergence of social norms, social relations and educational behavior, as could be shown in the examples above. The quality of early PO-relationships is presumably also related to attachment in early childhood (EGGERS, 1984; FINK, 1984), and to the kind of social contacts with peers.

Child No. 3 is an example for the possible influence of early attachment on PO-relations: At the beginning of the study he had a very tight bond with his mother. This close relationship paralysed his activities in kindergarten during the first weeks; he preferred playing alone, made no contacts with other children and did not develop new PO-relationships. Eventually he started making friends with other children, especially with child No. 7, thus loosening the tight relationship with his mother, and by that he was also able to expand his familiar PO-relationships.

Peers become more and more important during preschool period. The transition from home to kindergarten is an important and often problematic step. Many children are obliged for the first time in their lives to make contacts with peers and to play with them. Following the hypothesis of LEWIS & BROOKS (1975) which stresses the primacy of social (versus non-social) cognitions, the additional hypothesis can be made that children will first establish and stabilize new social contacts (i.e. structuring their person-person-relations) and only later will develop new surviving PO-relationships.

With respect to this hypothesis the study provides contradictory results (KASTEN, 1985). Some children were primarily concerned with social relations, while others were primarily concerned with object relations. Nevertheless we think that the hypothesis should

not be completely rejected. Rather the phenomena should be looked at within a broader context of mutual dependencies between social and non-social relationship patterns, their different context conditions, and other moderating influences (e.g. early experiences with siblings, attained stability of self-concept).

(3) Special developmental hypotheses

According to our data, special aspects of an individual's social relationships seem to have a marked influence upon the maintenance and change of his PO-relationships. There are many other hypotheses which can be supported or specified with data from our study. For example:

- Single children often have more difficulties detaching from their parents than children with siblings, and therefore the single children also have more difficulties creating new PO-relationships and maintaining or reactivating old PO-relationships during the period of being in kindergarten.

- Children who already have friends or siblings at kindergarten or who manage to bring a friend from their neighborhood to their kindergarten also have an advantage as to their PO-relationships.
- Significantly competitive children have more difficulties than others to find their place in the group and to build up surviving and more differentiated PO-relationships during kindergarten.

4.4 Conclusion

The interest development project enabled us to collect experiences with different research instruments, which will be helpful for further research in this area.
Our results give us a first insight into type and quality of PO-relationships during kindergarten, which seem to be early stages of interest development. In these early PO-relationships we can

already find important elements of the interest construct, as growing cognitive differentiation, selective perception, and positive emotional affection.

Further research should analyse the interdependency of object oriented and social (i.e. person oriented) relationships. For this purpose we already have started a secondary analysis of our data.

Studying the course of interest development in children is particulary important since interests of adults are powerful parts of their identity as well as of their intellectual capacities (DITTMANN-KOHLI & BALTES, in press). Educational consequences of further studies could result in the reasoning for educational goals, as well as the planning and realizing of conditions which are beneficial for the development of interests.

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